

Roadmap to a Sustainable Waste Management Future **Briefing Report**

Waste Diversion Strategies in the Unincorporated Communities of Los Angeles County
Throughout the Region and at County Operations



County of Los Angeles
Department of Public Works

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A Trash Solution for a Green Evolution



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Sustainable Waste Management Future Roadmap

On April 22, 2014, the Board of Supervisors adopted a motion directing the development of a Roadmap to achieve a Sustainable Waste Management Future for the County Unincorporated Communities. On October 21, 2014, the Board will consider adoption of the Sustainable Waste Management Future Roadmap. The Roadmap lays out the general framework for the strategies and initiatives that the County can implement in County Unincorporated Communities,

Regional/Countywide, and at County Operations to decrease reliance on landfills by maximizing the recovery of products, materials, and energy from waste that would otherwise be disposed at landfills and provides direction to the Department of Public Works and other County departments to initiate the implementation of the Roadmap.

October 21st Board Actions

1. Adopt the Roadmap to a Sustainable Waste Management Future, including recommended strategies, initiatives, and disposal reduction targets;
2. Direct the Department of Public Works, in coordination with the Working Group, to develop implementation plans, as appropriate, for the initiatives within the Roadmap to a Sustainable Waste Management Future;
3. Direct the Department of Public Works, in coordination with the Working Group, to solicit feedback from residents, businesses, public agencies, the waste industry, environmental organizations, and other stakeholders regarding the Roadmap to a Sustainable Waste Management Future;
4. Direct the Department of Public Works to submit annual reports to the Board on the progress of the implementation of the Roadmap to a Sustainable Waste Management Future, and consolidate the previously submitted semi-annual solid waste management status reports, including the Conversion Technology and the Countywide Siting Element status reports, into these annual reports.

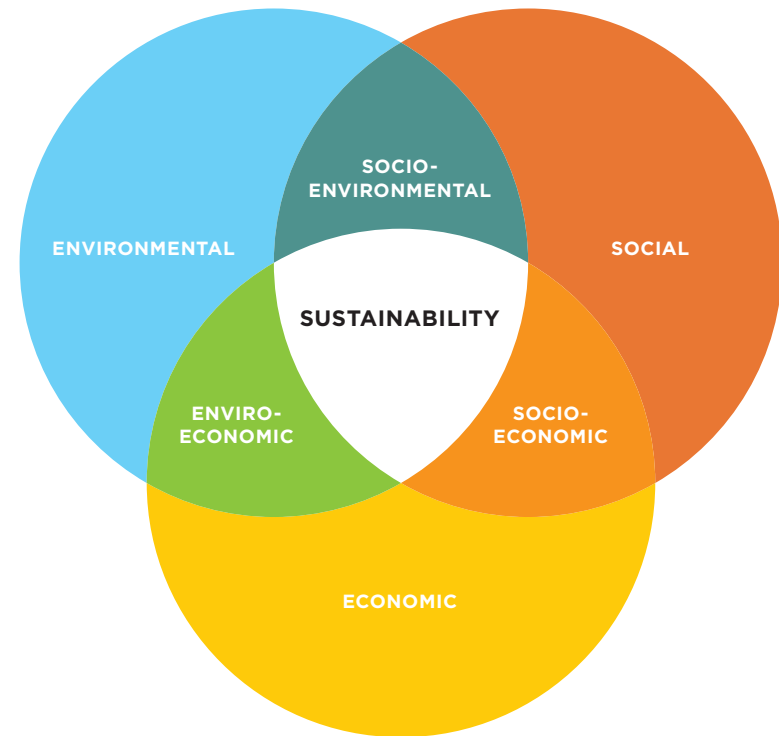


Alignment with Current County Priorities

The strategies identified in this Roadmap align closely with Los Angeles County's adopted plans and priorities, as well as other sustainability efforts, including:

- The Los Angeles County General Plan Update;
- The Los Angeles County Strategic Plan, Goal #2: Community Support and Responsiveness;
- The final draft Community Climate Action Plan; and
- The Public Works Strategic Plan

FIGURE 1: Elements of Sustainability



An integrated approach to environmental, social, and economic impact issues (both internal and external) leads to long-term, sustainable growth.

Key Drivers to a Sustainable Waste Management Future

- **AB 32 – Greenhouse Gas Reduction Law**
- **AB 341 – Statewide 75 Percent Recycling Goal and Commercial Recycling Mandate**
- **AB 1826 – Organics Diversion Mandate**
- **Diminishing Landfill Capacity in Los Angeles County**

The County unincorporated areas have already achieved and surpassed California's 50 percent waste diversion mandate. Nevertheless, landfill space in Los Angeles County is decreasing and regulatory drivers (e.g., AB 32, AB 341, and AB 1826) are leading the County to initiate a comprehensive plan for a waste free future. The County must be proactive and develop innovative policies and procedures for managing waste that further reduce the County's reliance on landfills. To be sustainable, we must be able to meet our current needs without

compromising the ability of future generations to meet their needs. Achieving a sustainable waste management future takes a fundamentally new approach beyond traditional waste reduction, which involves placing a greater emphasis on maximizing the benefits and use of materials over disposal. This in turn transforms waste from a liability into a resource, and creates a new vision to significantly reduce, and someday, eliminate waste.

FIGURE 2: Components of the Waste Stream



The State of Waste In 2014

More than 1 million people call the unincorporated communities of Los Angeles County home. The County Unincorporated Communities comprise 114 communities spread over more than 65 percent of the County's area – approximately 2,650 square miles – and represent approximately ten percent of the total population in Los Angeles County. In 2005 and 2006, the County conducted a comprehensive waste characterization study of the waste generation, disposal and diversion practices throughout the County unincorporated areas, including the residential and commercial sectors. At that time, the waste characterization found that the County Unincorporated Communities generated approximately 2.9 million tons of materials, equivalent to 14.8 pounds generated per resident per day (ppd), and 1.45 million tons were being disposed at landfills, resulting in a diversion rate of 50 percent for the County, compared to a 1990 baseline.

Currently, the County Unincorporated Communities dispose 4 ppd, achieving approximately a 70 percent diversion rate with respect to 2005 as the baseline year. **FIGURE 2** above shows the components of the waste stream currently going to landfills.

Materials are being diverted from landfill disposal through a number of existing waste reduction, reuse, and recycling programs. These programs are summarized in **TABLE 3** on **PAGE 11**.

FIGURE 2: Components of the Waste Stream



Structure of the Roadmap

The Roadmap is organized into three focus areas, listed to the right. The Roadmap also lays out the general framework for the strategies and initiatives that the County can implement to maximize the recovery of products, materials, and energy from waste that would otherwise be disposed of in landfills.

Initiatives, Program and Policy Options

Under each of the strategies, the Working Group identified specific initiatives and program and policy options, which will be further expanded in implementation plans. A highlight of key initiatives by focus area is presented on [PAGE 8](#).

Roadmap Focus Areas

- County Unincorporated Communities
- Regional/Countywide
- County Operations

Roadmap Strategies

- Quality Programs and Services
- Measuring Results
- Facilities and Infrastructure
- Outreach and Education

Disposal Reduction Targets

The intent of the Roadmap is to guide the County in implementing the four strategies and supporting initiatives to maximize the recovery of products, materials, and energy from waste that would otherwise be disposed of at landfills. In doing so, the County hopes to achieve the following intermediate and long-term disposal reduction targets:

- 80% diversion from landfills by 2025
- 90% diversion from landfills by 2035
- 95% + diversion from landfills by 2045

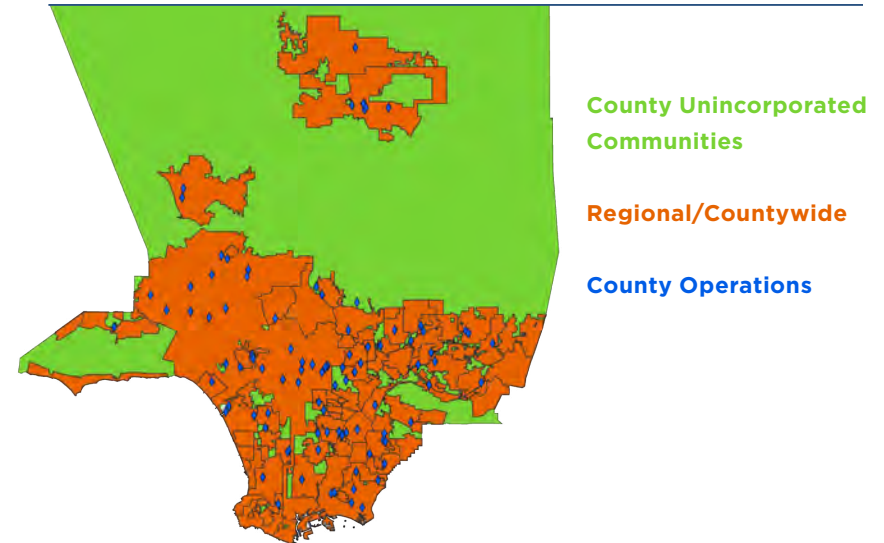


Organic Waste Systems Anaerobic Digestion Facility in Munster, Germany

Example of an outdoor zero waste station at the City of Vancouver, BC, with bins for **Refundable Containers**, **Mixed Containers**, **Mixed Paper**, **Compostables**, and **Garbage Only**



Los Angeles County Highlighting the Three Focus Areas of the Roadmap



County Unincorporated
Communities

Regional/Countywide

County Operations

COUNTY UNINCORPORATED COMMUNITIES

Recover Organics, including Food Waste, to Highest and Best Uses

Evaluate options to encourage the development of local organics diversion facilities, including composting, anaerobic digestion, and chipping/grinding operations, to help businesses in the County Unincorporated Communities comply with AB 1826.

Maximize Diversion of Construction and Demolition (C&D) Debris

Revise the County's C&D debris ordinance to increase diversion requirements from 50 percent to 70 percent for mixed debris and 100 percent for asphalt and concrete.

Advocate for Extended Producer Responsibility (EPR)

Explore the feasibility of establishing a County EPR ordinance for materials such as pharmaceuticals, needles, carpet, mattresses, and batteries.

Waste Sector Assessment

Conduct regular Waste Characterization Studies for unincorporated communities (all sectors) at 5- to 10- year intervals to determine material types being disposed which could ultimately be recycled.

Communication Action Plan

Develop an outline for a broad communication plan focused at the community level, based on demographics, resources, and commercial and industrial businesses in the target areas.

REGIONAL/COUNTYWIDE

Enhance Household Hazardous Waste (HHW) and Electronic Waste Management

Increase number of permanent HHW collection centers.

Develop Conversion Technologies and Integrated Materials Recovery Facilities

Establish a streamlined permitting process for such facilities.

Develop Resource and Recovery Centers and Re-Stores for Self-Haul Customers

Explore adoption of an ordinance or policy to develop Resource and Recovery Centers at all transfer stations in unincorporated areas.

COUNTY OPERATIONS

Evaluate County purchasing practices

Find ways to save money and reduce the purchase of excess food, paper, and other supplies that may be wasted and disposed of at landfills.

Waste Sector Assessment

Develop a methodology, schedule, and budget to conduct waste generation and disposal surveys at County operations.

Organics Processing Infrastructure at County Facilities

Establish guidelines and enable County facilities that are large-quantity food waste generators to do their own composting, where feasible.

Public Works is looking at next steps and has identified the following priority items related to the Roadmap that will require Board action within the next two years, as well as key initiatives for which the Working Group will prioritize the development of more detailed implementation plans.

TABLE 1: Planned Sustainable Waste Management Board Actions

Project	Description	Focus Area
Advanced Solid Waste Conversion Technology Services Contract	Contract for consultant services to assist Public Works in supporting the development of conversion technology facilities in the County to promote alternatives to landfills.	<i>Regional/Countywide</i>
Commercial and Institutional Recycling Program Contract	Contract to perform research and consultation regarding waste reduction and recycling practices for businesses, residences, large venues, schools, and other institutions, as well as County agencies. Also, will assist in the development of implementation plans and outreach.	<i>County Unincorporated Communities and County Operations</i>
Smart Business Contract	Contract to perform outreach to local businesses in the Unincorporated Communities to assist them with implementation of the Mandatory Commercial Recycling Act (AB 341).	<i>County Unincorporated Communities</i>
Waste Characterization Implementation Plan	Conduct regular Waste Characterization Studies for unincorporated communities (all sectors) at 5- to 10- year intervals to determine material types being disposed of which could ultimately be recycled. Also, the plan will develop a methodology, schedule, and budget to conduct waste generation and disposal surveys at County operations.	<i>County Unincorporated Communities</i>
Revised Construction and Demolition (C&D) Debris Ordinance	Ordinance to increase diversion requirements from 50 percent to 70 percent for mixed C&D and 100 percent for asphalt and concrete.	<i>County Unincorporated Communities and County Operations</i>
Roadmap Outreach Contract	Contract to implement a communication plan that will inform and educate residents, businesses, and County employees on the Roadmap and their role in achieving waste-free communities.	<i>County Unincorporated Communities and County Operations</i>

TABLE 2: Priority Sustainable Waste Management Implementation Plans

Project	Description	Focus Area
Household Hazardous Waste	Work with cities and landfill operators to increase the number of permanent household hazardous and electronic waste collection centers in the County.	<i>Regional/Countywide</i>
Organics Management	Evaluate options to encourage the development of local organics diversion facilities, including composting, anaerobic digestion, and chipping/grinding operations, to assist businesses in the County Unincorporated Communities with AB 1826 compliance, which requires large businesses to source separate organics for collection. The plan will also evaluate the best uses for recovered organics.	<i>County Unincorporated Communities</i>
Conversion Technology	Establish a streamlined and coordinated County permitting process for essential waste management facilities that are environmentally safe and technically feasible located in County Unincorporated Communities, including conversion technologies, material recovery facilities (MRFs), C&D processing facilities, and transfer stations. Sponsor and support legislation to encourage the environmentally sound development of conversion technologies and build a coalition of organizations.	<i>County Unincorporated Communities and Regional/Countywide</i>
Enhanced County Departments Recycling	Improve coordination between County Departments for waste reduction and recycling programs, clearly identify roles and responsibilities, and promote a consistent message in County operations.	<i>County Operations</i>
Extended Producer Responsibility (EPR)	Determine the feasibility of establishing EPR ordinances for materials such as pharmaceuticals, needles, carpet, mattresses, and batteries, while ensuring collected items are properly managed in accordance with Federal, State and local laws using environmentally sound practices	<i>County Unincorporated Communities and County Operations</i>
Revised Construction and Demolition (C&D) Debris Ordinance	Work with stakeholders and County Departments to make revisions to the C&D Ordinance, develop policies for recovering C&D debris from County projects, and taking other steps to divert C&D debris from disposal.	<i>County Unincorporated Communities and County Operations</i>

TABLE 3: Existing Waste Reduction, Reuse and Recycling Programs

Program	Description
County Green Building Program	In 2008, Los Angeles County adopted the Green Building Program, which included Drought-Tolerant Landscaping, Green Building, and Low Impact Development Ordinances, and created an Implementation Task Force and Technical Manual.
Construction & Demolition (C&D) Debris Ordinance	The County's C&D Ordinance requires projects in the unincorporated areas to recycle or reuse 50 percent of the debris generated thereby increasing the diversion of construction and demolition debris from disposal facilities.
County Building LEED Certifications	Since 2008, new County buildings of 10,000 sf or more have achieved Silver Certification or higher under the U.S. Green Building Council's Leadership in Energy and Environmental Design. Since January 2010, all capital projects must also comply with the California Green Building Standards Code requiring projects meet minimum waste diversion, energy efficiency and potable water use standards.
Department of Public Health Healthy Design Proposal	In 2009, the Board of Supervisors instructed the Departments of Public Health, Regional Planning, Public Works and other departments to develop design standards for building pedestrian, transit, and bicycle friendly developments, promote walking and other outdoor physical activities, which will ultimately be incorporated into the County's Public Works design standards, and the Healthy Design Ordinance.
Phase Out of Expanded Polystyrene Food Containers at County Buildings	The Board of Supervisors directed Public Works to phase out the use of expanded polystyrene (EPS) food packaging at all County operations, including restricting the purchase and use of all EPS food containers at County facilities, offices, County-managed concessions, and commercial food and beverage suppliers at County-permitted or -sponsored events.
Farm Restoration at Pitchess Detention Center (PDC)	Operation of a farm at otherwise vacant land at PDC offsets significant inmate food costs, provides vocational and educational opportunities for jail inmates, lowers the facility's carbon footprint, and ensures food supply for inmates. The farm program includes bees and honey production, vermiculture, small scale protein production (tilapia and chicken), greenhouse plant propagation, and community gardens.
Sheriff/DPW Composting Pilot	PDC green waste and food waste is composted and used as a soil amendment for the PDC farm. This reduces waste going to landfills as well as transportation costs and disposal fees. Compost production provides soil amendments for farm operations.
Green Purchasing Policy	A procurement policy for the purchase of recyclable materials and recycled-content products and that encourages manufacturers and vendors to reduce environmental impacts in production and distribution.

TABLE 3: Existing Waste Reduction, Reuse and Recycling Programs

Program	Description
Household Hazardous Waste (HHW) Program	Provides residents with a convenient outlet to dispose of their HHW at a permanent center or collection event in various communities throughout the County. These events provide residents with a free means to dispose of their toxic, poisonous, corrosive, flammable, and combustible household items, as well as electronic waste.
Los Angeles County Materials Exchange Program (LACoMax)	Designed to divert usable materials from disposal. Serves as an electronic marketplace where parties can exchange materials at no cost. Users of this on-line service can post or search listings of a wide variety of available and wanted materials.
Pharmaceuticals - No Drugs Down the Drain	Provides for the proper collection and disposal of unused, unwanted, and expired medications.
Plastic Bag Ban	An ordinance banning single-use plastic carryout bags at stores in the County unincorporated areas, while requiring a 10-cent charge for each paper carryout bag sold to a customer. The 10-cent charge on paper bags is retained by stores for use in complying with the ordinance.
Recycling Market Development Zone (RMDZ)	Combines recycling with economic development to fuel new businesses, expand existing businesses, create jobs, and divert waste from landfills. It also provides business and technical assistance, product marketing, and financial assistance to businesses that manufacture a recycled-content product or process materials for recycling.
Smart Gardening	Offers free workshops to all County residents so they can learn about backyard composting, worm composting, grass recycling, water-wise gardening, and fire-wise gardening.
Sustainable Beaches Program	Water conservation measures in the form of high efficiency restroom fixture replacements, drought tolerant landscaping, and more efficient irrigation/controls. Alternative fuel vehicle replacements are ongoing, and nearing a total of 25%, of Department of Beaches and Harbors fleet. Installation of additional bike racks, LED lighting, and electric vehicle charging stations are also underway.
Youth Education	Programs that reach out to elementary and secondary school students to teach them about helping the environment and encourages them to make a difference in their local environment by creating campus eco-projects. It also provides development training and personalized support for school teachers including a resource guide.

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